RIORDAN ET AL.
"Software Content Downloading Methods
in radio Communication Networks"
Atty. Docket No. CS11457

Appl. No. 10/083,876
Confirm. No. 4745
Examiner G. Duong
Art Unit 2155

REMARKS

Request for Reconsideration, Informal Matters, Claims Pending

The non-final Office action mailed on 27 July 2005 has been considered carefully. Reconsideration of the claimed invention in view of the amendments above and the discussion below is respectfully requested.

Applicants decline to adopt the Examiner's recommendation to include the term 'comprising' in the dependent claims. Claim 18 has been amended as suggested by the Examiner.

Claims 1-19 are pending.

Allowability of Claims Over Tanaka

Rejection Summary

Claims 1-4 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,671,509 (Tanaka). Office Action, 27 July 2005.

Allowability of Claim 1

Regarding Claim 1, contrary to the Examiner's assertion, Tanaka fails to disclose or suggest a

radio communication network software downloading method, comprising:

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communicating terminal unique information for the downloading of common software content from the network to a plurality of terminals in the network on corresponding dedicated communication channels for each terminal;

transmitting the common software content from the network to the plurality of terminals on a shared communication channel.

The Examiner's references to various passages of Tanaka to support the rejection are misplaced. At col. 14: 26-44 (referenced by the Examiner), Tanaka discusses designating a download channel using a control channel (SACCH). At col. 9: 8-21 (also referenced by the Examiner), Tanaka discloses sending instructive information from a base station 12 to a mobile station (MS) 14 on a broadcast channel, and then sending system software to the MS on a control channel or a unidirectional control channel. Tanaka thus appears to teach the opposite of what is claimed. In Claim 1, terminal unique information is sent on a dedicated channel (not a broadcast channel as in Tanaka), and common software is sent on broadcast channel. Claim 1 is thus patentably distinguished over Tanaka.

Allowability of Claim 2

Regarding Claim 2, Tanaka fails to disclose or suggest in combination with Claim 1,

... receiving a request for the common software content from a plurality of terminals on corresponding dedicated communication channels for each terminal,

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transmitting the common software content from the network to the plurality of terminals making the request on the shared communication channel after receiving the request;

receiving confirmation from each of the plurality of terminals that received the software content on corresponding dedicated communication channels for each terminal after transmitting.

Contrary to the Examiner's assertion, Tanaka does not disclose or suggest broadcasting content to multiple mobile stations or any of the limitations of Claim 2. At col. 7: 31-32, Tanaka discusses generating a request from only a single MS. At col. 8: 22-23, Tanaka discusses transmitting system software to only a single MS. At col. 7: 47-49, Tanaka discusses receiving a download completion notice from only a single MS. Claim 2 is thus further patentably distinguished over Tanaka.

Allowability of Claim 3

Regarding Claim 3, Tanaka fails to disclose or suggest in combination with Claim 1,

... sending a message to a plurality of terminals on corresponding dedicated communication channels to receive the common software content on a shared channel;

transmitting the common software content from the network to the plurality of terminals on the shared channel after sending the message;

receiving confirmation from each of the plurality of terminals that received the common software content on corresponding dedicated communication channels for each terminal after transmitting.

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Contrary to the Examiner's assertion, Tanaka does not disclose or suggest broadcasting content to multiple mobile stations or any of the limitations of Claim 3. Claim 3 is thus further patentably distinguished over Tanaka.

Allowability of Claim 4

Regarding Claim 4, Tanaka fails to disclose or suggest in combination with Claim 1,

> ... receiving confirmation from each of the plurality of terminals that received the common software content on corresponding dedicated communication channels for each terminal after transmitting.

Contrary to the Examiner's assertion, Tanaka does not disclose or suggest broadcasting content to multiple mobile stations or any of the limitations of Claim 4. Claim 4 is thus further patentably distinguished over Tanaka.

Allowability of Claims Over Tanaka & Wiehler

Rejection Summary

Claims 5 and 18-19 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,671,509 (Tanaka) in view of U.S. Patent No. 6,850,915 (Wiehler). The Examiner relies upon Wiehler for teaching the use of a digital signature.

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Allowability of Claim 5

Regarding Claim 5, Tanaka and Wiehler fail to disclose or suggest in combination with Claim 1,

> ... transmitting a digital signature from the network to a plurality of terminals over corresponding dedicated communication channels for each terminal;
> transmitting the common software content from the network to the plurality of terminals on the shared communication channel after transmitting the digital signature.

Wiehler discloses the use of authorization certificates in network having centralized data distribution. The transmission of data in Wiehler is based on a secure connection between the user and data server, and thus the authentication of Wiehler is not suitable for the broadcast transmission of Tanaka. Claim 5 is thus further patentably distinguished over Tanaka and Wiehler.

Allowability of Claim 18

Regarding Claim 18, contrary to the Examiner's assertion, Tanaka and Wiehler fail to disclose or suggest a

> ... radio communication network software downloading method, comprising:
> transmitting a digital signature from the network to a plurality of terminals over dedicated communication channels for each terminal;

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transmitting the software content from the network to the plurality of terminals on a shared communication channel after transmitting the digital signature.

At col. 8: 42-43, Tanaka discloses selectively downloading software items that are cyclically broadcast by a base station. In Tanaka, the software items are always available on the broadcast channel. The disclosure of Wiehler is based on a dedicated connection between the user and data server. The transmission of data in Wiehler is based on a secure connection between the user and data server. Thus the authentication of Wiehler is not suitable for the broadcast transmission of Tanaka. Claim 18 is thus patentably distinguished over Tanaka.

Allowability of Claim 19

Regarding Claim 19, Tanaka fails to disclose or suggest in combination with Claim 18, "... receiving confirmation from each of the plurality of terminals that received the software content on corresponding dedicated communication channels for each terminal after transmitting." Claim 18 is thus further patentably distinguished over the art.

Allowability of Claims Over Tanaka & Varanasi

Rejection Summary

Claims 6, 7, 9-10, 15 and 16 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,671,509 (Tanaka) in view of U.S.

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Patent No. 6,219,341 (Varanasi).   The Examiner relies upon Varanasi for

teaching that "... spread spectrum signals may be dynamically allocated."

Allowability of Claim 6

Regarding Claim 6, Tanaka and Varanasi fail to disclose or

suggest in combination with Claim 1,

> ... multiplexing a plurality of different common software content
> on the shared communication channel, dynamically adjusting the
> plurality of different common software content multiplexed on the
> shared communication channel.

At, col. 8: 56-68, Tanaka discloses a base station that time multiplexes the

transmission of software in different systems, for example, CDMA, PHS, PDC.

In Tanaka, the software for the different systems is on different broadcast

channels, dependent on the particular system.   Thus Tanaka does not

multiplex software content on a shared communication channel.   Varanasi

discloses allocating spread spectrum radio resources to different users using

spreading codes.   Varanasi neither multiplexes different software content on a

shared communication channel, nor dynamically adjusts the multiplexed

software.   Claim 6 is thus further patentably distinguished over Tanaka and

Varanasi.

Allowability of Claim 7

Regarding Claim 7, Tanaka and Varanasi fail to disclose or

suggest in combination with Claim 1,

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> ... dynamically adjusting the plurality of different common software content in proportion to a changing number of the plurality of terminals receiving the plurality of different common software content.

The Examiner's reliance on Varanasi is misplaced. Varanasi discloses allocating spread spectrum radio resources to different users using spreading codes. Varanasi neither multiplexes different software content on a shared communication channel, nor dynamically adjusts the multiplexed software in proportion to a changing number of terminals receiving the software. Claim 7 is thus further patentably distinguished over Tanaka and Varanasi.

Allowability of Claim 9

Regarding Claim 9, contrary to the Examiner's assertion, Tanaka and Varanasi fail to disclose or suggest a

> ... radio communication network software downloading method, comprising:
> transmitting software content from a radio communication network to a plurality of terminals in the network by multiplexing the software content on a shared communication channel received by the plurality of terminals;
> dynamically adjusting the software content multiplexed on the shared communication channel.

Tanaka discloses a base station that time multiplexes the transmission of software in different systems, for example, CDMA, PHS, PDC. In Tanaka, the software for the different systems is on different broadcast

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channels, dependent on the particular system. Thus Tanaka does not multiplex software content on a shared communication channel. Varanasi discloses allocating spread spectrum radio resources to different users using spreading codes. Varanasi neither multiplexes different software content on a shared communication channel, nor dynamically adjusts multiplexed software on a shared communication channel. Claim 9 is thus patentably distinguished over Tanaka and Varanasi.

Allowability of Claim 10

Regarding Claim 10, Tanaka and Varanasi fail to disclose or suggest in combination with Claim 9, "... dynamically adjusting the software content multiplexed on the shared communication channel from a radio device management server in communication with the radio communication network." Claim 10 is thus further patentably distinguished over the art.

Allowability of Claim 15

Regarding Claim 15, Tanaka and Varanasi fail to disclose or suggest in combination with Claim 9,

> ... the software content comprises a plurality of software files, dynamically adjusting the software content multiplexed on the shared communication channel based upon at least one of file size and a number of the plurality of terminals receiving the software files.

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Tanaka multiplexes the software based on the number systems, not based on
the size of the files or on the number of terminals receiving the software.
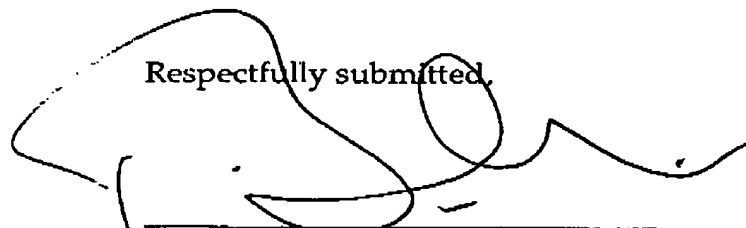Claim 10 is thus further patentably distinguished over the art.

Allowability of Claim 16

Regarding Claim 16, Tanaka and Varanasi fail to disclose or
suggest in combination with Claim 9, "... receiving confirmation from each of
the plurality of terminals that received the software content on corresponding
dedicated communication channels for each terminal after transmitting."
Claim 16 is thus further patentably distinguished over the art.

Prayer For Relief

In view of the amendments and the discussion above, the Claims
of the present application are in condition for allowance. Kindly withdraw any
rejections and objections and allow this application to issue as a United States
Patent without further delay.

Respectfully submitted,

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